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EDUCATIONAL ATTITUDES AND PERCEPTIONS OF DESIRABLE TRAITS OF TEACHERS.

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TO TEST THE HYPOTHESIS THAT PERCEPTIONS OF THE CHARACTERISTICS OF EFFECTIVE TEACHERS ARE INFLUENCED BY JUDGES' ATTITUDES TOWARD EDUCATION, SEVEN "SUCCESSFUL" ADJECTIVE-CHECKLIST AND AGREE-DISAGREE SCALES (AMONG AN INITIAL 11 SCALES) WERE ADMINISTERED TO EIGHT SAMPLES OF FROM 131 TO 556 TEACHERS AND GRADUATE EDUCATION STUDENTS IN FIVE STATES. THOSE WHO CHARACTERIZED THEMSELVES AS HAVING PROGRESSIVE PHILOSOPHIES OF EDUCATION TENDED TO PERCEIVE PERSON-ORIENTED TRAITS AS DESIRABLE FOR TEACHERS, WHILE "TRADITIONALISTS" SELECTED TASK-ORIENTED TRAITS AS DESIRABLE. FOR THE NEW YORK AND INDIANA SAMPLES (457), BOTH TEN- AND FOUR-FACTOR FIRST-ORDER ANALYSES WERE PERFORMED FOR A PROGRESSIVE-TRADITIONAL SCALE AND A TASK VERSUS PERSON-ORIENTED SCALE. TWO SECOND-ORDER FACTORS WERE EXTRACTED--ONE CHARACTERIZED BY PROGRESSIVISM AND PERSON-ORIENTED FIRST-ORDER FACTORS, AND THE OTHER BY TRADITIONALISM AND TASK-ORIENTED FIRST-ORDER FACTORS. THIS STRUCTURAL CONGRUENCE CONFIRMS THE HYPOTHESIS. THE AUTHORS FURTHER CONCLUDED THAT PROGRESSIVISM AND TRADITIONALISM ARE THE UNITIES UNDERLYING THE DOMAINS OF EDUCATIONAL ATTITUDES OR PHILOSOPHIES AND OF PERCEIVED TEACHER TRAITS. THIS PAPER WAS PRESENTED AT THE AMERICAN EDUCATIONAL RESEARCH ASSOCIATION ANNUAL MEETING (NEW YORK, FEBRUARY 18,1967). (LC)

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Educational Attitudes and Perceptions of Desirable Traits of Teachers[1]

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How do attitudes toward education affect perceptions and judgments of desirable traits of teachers? Do individuals with progressive educational attitudes "see" the effective teacher differently than individuals with traditional educational attitudes? Are perceptions of desirable teacher traits congruent with the attitudes of the perceiving individual? The basic hypothesis of this study was: Perceptions of the characteristics of the "good" or effective teacher are in part determined or influenced by judges' attitudes toward education.

Central directive-state theory underlies this hypothesis. The basic idea of the theory is that perceptions are influenced not only by the actual properties of stimuli and their environments but also by internal directive states of individuals--emotions, motives, values, attitudes, and so on. The directive state of this study is attitude.

Our previous research indicates that two basic factors underlie attitudes toward education. They have been named "progressivism" and "traditionalism" since they correspond closely to philosophical descriptions of these sets of educational beliefs. We have also found that two basic factors, "person orientation" (A) and "task orientation" (B), underlie perceptions of desirable teacher traits. Another mode of expressing our hypothesis is that these two perceptual factors are congruent with the two basic educational attitude factors. "Congruent with" means that the factor structures of both domains are basically dualistic and will in general occupy the same factor space, and that the contents of the perception factors are compatible with the contents of the educational attitude factors.

In a Q study that preceded the research just mentioned, it was found that 36 judges with "known" attitudes toward education chose sets of teacher traits congruent with their attitudes. The present study is an R-methodological approach to the same problem. It seeks to test the hypothesis cross-sectionally using large numbers of subjects in various parts of the country.

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[1]Paper presented at the annual meeting of the American Educational Research Association, February 18, 1967.

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More specifically, we predicted that progressivism attitude measures would correlate positively with person-orientation teacher trait perception measures, and traditionalism attitude measures would correlate positively with task-orientation trait perception measures. In addition, when judges are asked to choose teachers on the basis of trait descriptions that separately incorporate the two factors, they will choose those teachers whose descriptions are congruent with their educational attitudes. Furthermore, it was predicted that second-order factor analysis of educational attitude and trait perception items together would yield two second-order factors. Progressivism and person-orientation first-order factors would characterize one of these second-order factors, and traditionalism and task-orientation first order factors would characterize the other second-order factor.

Method

Eleven instruments to measure attitudes and perceptions were used, ten of which were constructed for the study. Of these eleven, four were not successful and were dropped. We discuss only the seven "successful" instruments.

The three educational attitude scales, ES-I (Education Scale I), ES-VI, and ES-VII, were summated-rating, seven-point instruments with half their items expressing progressive educational beliefs (A) and half expressing traditional beliefs (B). ES-I (20 items) was developed in previous research. ES-VI (46 items) and ES-VII (30 items) were developed for this study, the former from Q and R studies and the latter from item and factor analyses of ES-VI. The details of the construction and validation of these scales have been reported elsewhere. The means, standard deviations, reliability coefficients, and the correlations between the A and B subscales of the three scales for eight varied samples are reported in Table 1. Time limitations forbid detailed discussion. It can be said, however, that the scales, especially ES-VI and ES-VII, are reliable and factorially valid measures of progressivism and traditionalism.

The construction of Teacher Characteristics Scales I and VIII (TC-I and TC-VIII) have also been described elsewhere. We therefore describe these scales only briefly. TC-I is a 38-item summated-rating scale with 14 so-called A items, 14 B items, and 10 N, or neutral, items. The items, all positive adjectives were selected on the basis of a Q study (reported elsewhere). The A and B items were those that had high positive Q factor array values yielded by factor analysis of the intercorrelations of the responses of judges who had high loadings on Factors A and B of the factor analysis. The N (neutral) items had intermediate values on both factors; they were used as buffer items. TC-VIII had 22 items, 11 A and 11 B, selected on the basis of item analyses and factor analyses of TC-I.

The statistics of TC-I and TC-VIII for seven samples are reported in Table 2. They are unexceptional and require no comment, except to say that the reliabilities are satisfactory.

The remaining two instruments used to measure the dependent variable, perceptions of desirable teacher characteristics, can be called "situational" instruments. To construct the first of these, "Hiring Teachers-I," or HT-I, the A and B adjectives that were high on the Q factor arrays just mentioned were incorporated in teacher descriptions, six A or six B adjectives in each description. There were 18 descriptions each of which contained various items of information about the teachers described and the six adjectives. The descriptions varied only in adjectival characterizations; all other factors were controlled. Of the 18 descriptions, six were A descriptions, six were B descriptions, and six were neutral (for buffer purposes). Subjects were asked to imagine that they had to recommend to their superintendents six teachers of the 18 to be hired by the board of education.

HT-III was similarly constructed from the factor analytic results of the Q study mentioned earlier and the item and factor analyses of ES-VI. It had 14 items, or descriptions, six A, six B, and two buffers ("neutral" adjectives).

A subject's "score" on HT-I or HT-III was defined probabilistically. The attitude scores were dichotomized at the medians of the attitude A and B scores: above the medians were called Highs and below the medians Lows. If a High A chose four, or five, or six HT-I A descriptions, this was a "hit," and similarly for a High B and HT-I B descriptions. The exact probability of a hit--calculated from the hypergeometric distribution for 18 things taken six at a time--was .057. With HT-III, a subject had to choose, from the 14 descriptions, four or five A or B descriptions to obtain a hit (the probability of four or five was .063).

To test the hypothesis, we calculated the correlations between ES-I and TC-I, ES-VI and TC-I, and ES-VII and TC-VIII for each sample separately. We also counted the numbers of hits for attitude High A's, Low A's, High B's, and Low B's, and calculated chi squares based on the exact probability expectations just mentioned.

The "crucial" test of the hypothesis involved first- and second-order factor analyses of the combined items of ES-VII and TC-VIII. These analyses will be described later.

The attitude and teacher trait instruments were administered to eight samples of teachers and graduate students of education in New York, North Carolina, Texas, Wisconsin, Long Island, and Indiana. The different instruments administered to the different samples can be seen in the tables.

Results

The correlations between the ES A and B measures and the TC A and B measures are given in Table 3. The directly pertinent r's are those between A - A and B - B. They are underlined. All the correlations are positive and significant at the .01 level or better, though they are quite modest, ranging from .23 to .44. The average r's, via z, are .29 for A - A and .37 for B - B. (Note, too, that the A - B and B - A r's are considerably lower: 11 of the 16 are not significant.) The correlation results, then, support the hypothesis, though not dramatically.

The observed numbers of hits, the expected numbers of hits by chance, the proportions of hits, and the x^2 s for the attitude (ES) High and Low A and B groups are reported in Tables 4 and 5. Of the 10 x^2 s, eight are significant at the .001 level, the remaining two (Table 4) significant at the .05 and .01 levels. (To interpret Tables 4 and 5, note that, with ESA High, N=142, four hits can be expected by chance, and 31 hits were observed.)

To aid in the interpretation of the data, we have calculated a simple index of association, IA. In each case we subtracted the Low proportions of hits from the High proportions. Some such index is necessary because we predicted significant numbers of hits for the Highs only, but were aware that the social desirability of the adjective clusters, all of which were positive, would attract choices from many of the Ss. The IA's of the two tables range from .08 to .29, with an average of .18. These differences seem sufficiently large to warrant confidence in the results, especially when the difficulty of the choice tasks for the Ss is considered.

Two first- and second-order factor analyses of the combined ES-VII and TC-VIII item intercorrelations (a 52 by 52 R matrix) of the combined New York and Indiana samples (N=457) were used: a first-order four-factor solution and a first-order ten-factor solution. The principal axes method and Promax oblique rotations were used in the first-order solutions. Two second-order factors were extracted (principal axes method) from both first-order solutions to test the congruence form of the hypothesis. Factor analytically, the ten-factor solution is more satisfactory than the four-factor solution. Nevertheless, we used the four-factor solution to supply a "forced" test of the hypothesis. That is, if we could separate the attitude and perception A factors from the attitude and perception B factors with ten factors and, in addition, with only four factors, each of the four presumably identified with one of the four attitude and perception measures, then we would have a truly rigorous test of the hypothesis.

The correlations among the primary factors and the unrotated and orthogonally rotated second-order factor matrices of the four- and ten-factor solutions are given in Tables 6, 7, 8, and 9. The evidence of the four factor solution (Table 7) is clear: the A factors of ES and TC load

on one second-order factor, and the B factors load on the other factor. In the ten-factor solution, too, the first-order factors, with one exception (No. II), are loaded as the hypothesis dictates.

Since structural congruence has been found in this study, we must ask finally, whether the contents of the two sets of factors "agree," or are "congruent." It seems that they are congruent, but we do not have time to demonstrate the case. We can only say here that philosophic analyses of educational ideology indicate that, on the one hand, person orientation is an important aspect of progressive beliefs and task orientation an important aspect of traditional beliefs.

Conclusion

The expectations outlined in the beginning of this paper seem to be confirmed. If the relations repeatedly found in different samples and with different measurement instruments can be trusted, we may be able to say that attitudes toward education influence perceptions of desirable traits of teachers. Specifically, some modest but perhaps significant (in the non-statistical sense) part of the variance of person-oriented perceptions of teachers may be determined by progressive educational attitudes, and similarly, the variance of task-oriented perceptions may be determined by traditional educational attitudes.

The limitations of the study, of course, circumscribe these conclusions. We are encouraged, however, by the results, but particularly by the results of the second-order factor analyses of the combined attitude and perception items. These analyses seem to reveal the basic structure of whatever is common to educational attitudes and teacher-trait perceptions. Are there unities that underly the diversities within and between the attitude and trait-perception domains? We think there are. Indeed, we think that these unities are progressivism and traditionalism and that their existence and their relations to other educational phenomena may, eventually and hopefully, supply basic explanations of a number of aspects of education.

Table 1

Means, Standard Deviations, Reliability Coefficients, and Correlations Between Factors: ES-I, ES-VI, and ES-VII, All Samples

		A				B			
	N	M	s	r_{tt}[a]	M	s	r_{tt}[a]	r_{AB}
ES-I:								
N.Y.	142	5.36	.85		4.29	.95		-.19
N.Y.	234	5.35	.77	.71	4.45	.89	.71	-.23
ES-VI:								
N.Y.	344	5.51	.71	.85	4.14	.85	.86	-.30
N.C.	404	5.51	.54	.80	4.19	.74	.83	-.27
Tex.	556	5.25	.67	.83	4.43	.74	.82	-.18
Mil.	218	5.46	.55	.78	4.04	.74	.83	-.33
ES-VII:								
L.I.	298	5.54	.69	.79	4.34	.85	.78	-.15
Ind.	322	5.51	.60	.76	4.24	.65	.69	.02

[a] r_{tt} = alpha reliability coefficient.

Table 2

Means, Standard Deviations, Reliability Coefficients, and Correlations Between Factors: TC-I and TC-VIII, All Samples

		A				B			
	N	M	s	r_{tt}[a]		M	s	r_{tt}[a]	r_{AB}
TC-I:									
N.Y.	131	5.34	.76	.84		5.45	.86	.86	.27
N.Y.	132	5.69	.71	.84		5.37	.74	.80	.44
N.Y.	313	5.53	.72	.82		5.12	.82	.83	.40
N.C.	404	5.28	.69	.80		5.45	.68	.80	.51
Tex.	480	5.21	.74	.83		5.59	.69	.80	.61
TC-VIII:									
L.I.	298	5.07	.87	.80		5.22	.84	.82	.33
Ind.	159	4.94	.72	.69		5.16	.77	.77	.23

[a] r_{tt} = alpha reliability coefficient.

Table 3

Correlations Between ES-I, ES-VI, and ES-VII and TC-I and TC-VIII Measures, All Samples[a]

	N.Y., N=142		N.Y., N=132		N.Y., N=103	
	ES-I A	ES-I B	ES-I A	ES-I B	ES-VI A	ES-VI B
TC-I A	.29	-.10	.24	-.23	.30	-.10
TC-I B	-.21	.43	-.14	.30	-.25	.44

	N.C., N=404		Tex., N=480		Mil., N=218	
	ES-VI A	ES-VI B	ES-VI A	ES-VI B	ES-VI A	ES-VI B
TC-I A	.23	-.03	.30	.02	.27	.00
TC-I B	.04	.39	-.04	.24	-.19	.35

	L.I., N=298		Ind., N=159	
	ES-VII A	ES-VII B	ES-VII A	ES-VII B
TC-VIII A	.40	.04	.29	-.02
TC-VIII B	-.16	.39	-.09	.38

[a] r's pertinent to the hypothesis are underlined

Table 4

ES-I and HT-I: Number and proportions of "Hits" in High and Low Attitude Groups, New York Samples[a]

		N = 142			N = 132			N = 102		
		fo	fe	p	fo	fe	p	fo	fe	p
ESA:										
	High	31	4.05	.44	37	3.76	.52	28	2.91	.55
	Low	21	4.05	.30	15	3.76	.23	15	2.91	.29
		χ^2 = 252.80 (.001)			χ^2 = 332.77 (.001)			χ^2 = 268.16 (.001)		
		IA = .14			IA = .29			IA = .26		
ESB:										
	High	25	4.05	.35	10	3.76	.15	7	2.91	.14
	Low	8	4.05	.11	2	3.76	.03	3	2.91	.06
		χ^2 = 112.03 (.001)			χ^2 9.65 (.01)			χ^2 4.719 (.05)		
		IA = .24			IA = .12			IA = .08		

[a] fo = frequency observed; fe = frequency expected; p = proportion of group with "hits", IA = index of association; probability of a "hit" by chance, one individual = .057.

Table 5

ES-VII and HT-III: Number and Proportions of "Hits" in High and Low Attitude Groups, Long Island and Indiana Examples[a]

	L.I., N = 298			Ind., N = 158		
	fo	fe	p	fo	fe	p
ESA:						
High	61	9.39	.41	27	4.98	.34
Low	37	9.39	.25	16	4.98	.20
	χ^2 = 381.13 (001)			χ^2 = 123.26 (.001)		
	IA = .16			IA = .14		
ESB:						
High	42	9.39	.28	22	4.98	.28
Low	14	9.39	.09	12	4.98	.15
	χ^2 = 119.36 (.001)			χ^2 = 67.779 (.001)		
	IA = .19			IA = .13		

[a]For definitions of symbols, see Footnote a, Table 4. Probability of a "hit" by chance, one individual = .063.

Table 6

Correlations Among Primary Factors, Four Factors, ES-VII + TC-VIII, Combined Sample, N=457 [a]

	ESB	TCA	TCB
ESA	-.02	.36	-.03
ESB		-.04	.21
TCA			.07

[a] r's pertinent to the hypothesis are underlined

Table 7

Unrotated Second-Order Factors, Four-Factors Solution, ES-VII + TC-VIII, Combined Sample (L.I. + Ind.), N=457[a]

	A	B	Scale
I	.60	-.03	ESA
II	-.05	.45	ESB
III	.60	.05	TCA
IV	.03	.47	TCB

[a]It is obvious that this matrix needed no rotation.

Table 8

Correlations Among Primary Factors, Ten Factors,
ES-VII ÷ TC-VIII, Combined Samples, N=457[a]

	II	III	IV	V	VI	VII	VIII	IX	X
	TCB	ESA	TCA	ESA	ESB	ESA	TCA	TCB	TCA
I	21	-33	-21	-25	49	10	-26	35	-01
II		12	29	30	15	19	23	22	24
III			37	51	-01	40	11	-29	08
IV				28	-17	16	25	00	15
V					08	42	27	-10	26
VI						20	-16	24	00
VII							20	-06	27
VIII								-04	25
IX									16

[a]Factor I = ESB. Decimal points are omitted.

Table 9

Unrotated and Rotated Second-Order Factor Matrices, Ten-Factor Solution, ES-VII + TC-VIII, Combined Example, N=457[a]

	I	II	A	B	Scale
I	-.45	.67	-.20	.79	ESB
II	.31	.47	.45	.34	TCB
III	.71	-.05	.65	-.29	ESA
IV	.49	.02	.47	-.15	TCA
V	.70	.18	.72	-.07	ESA
VI	-.14	.61	.08	.63	ESB
VII	.48	.36	.57	.17	ESA
VIII	.43	.00	.40	-.15	TCA
IX	-.23	.45	-.06	.50	TCB
X	.31	.25	.38	.13	TCA

[a]Loadings $\geq$.35 are considered significant. They are underlined.